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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,418	08/04/2006	Neville Hedrick	78500-328434	3618

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FAEGRE & BENSON LLP  
PATENT DOCKETING - INTELLECTUAL PROPERTY  
2200 WELLS FARGO CENTER  
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MINNEAPOLIS, MN 55402-3901

EXAMINER
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ANDRISH, SEAN D

ART UNIT	PAPER NUMBER
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3672

NOTIFICATION DATE	DELIVERY MODE
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05/19/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/566,418	<b>Applicant(s)</b> HEDRICK, NEVILLE	
	<b>Examiner</b> SEAN D. ANDRISH	<b>Art Unit</b> 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 - 5, 11 - 13, and 16 - 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 5, 11 - 13, and 16 - 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim limitations of claims 11 and 12 are identical. The only difference between the claims 11 and 12 is the intended use as recited in the preambles.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 11, 12, and 16 - 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Stankus et al. (6,270,290).

Regarding claims 1, 2, 11, 12, 16, 18, and 19, Stankus et al. discloses a cable bolt comprising: a cable (14) comprised of multiple strands; a plurality of spaced apart bulbous portions (24, 26, 28, 30) encased in resin (72); a resin dam (resin compactor 36); a bulb diameter of the bulbous portions varies along the length of the bolt; a plurality of rigid elements (nut/washer 32), each of said plurality of rigid elements would inherently have an outermost surface; all of the six helically placed outer strands of each bulbous portion extends at least in part around the outermost surface of the rigid element (32); and minimal clearance between the outermost surface of the rigid element and a broadest part of a cavity of the bulbous portion

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(Figs. 3 and 5; column 4, lines 60 - 66; column 5, lines 11 - 17). Examiner notes that Stankus et al. teaches six outer strands forming the bulbous portion and one central strand. All six of the strands forming the bulbous section extend at least in part around the outermost surface of the rigid element (32). Examiner interprets the phrase “spaced apart” to mean that each bulbous portions occupies a different location on the tendon and is not overlapping the location along the tendon at which another bulbous portion is positioned.

Regarding claim 17, Stankus et al. further discloses forming a bulbous section (birdcage 24, 26, 28, 30) by using a spreading tool to separate the central strand from the surrounding strands and placing a nut or washer over an end of the central strand (column 5, lines 48 - 60). Examiner notes that there will inherently be tension between the outer strands that would encourage the strands to return to their original configuration. Examiner considers the central strand to be functionally equivalent to a rod.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stankus et al.

Regarding claim 3, Stankus et al. discloses all of the limitations of the above claim(s) except for variable bulb frequency. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the bolt as disclosed by

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Stankus et al. to include a bulb frequency of the bulbous portions that varies along the length of the bolt as a matter of design choice within the skill of the art.

Regarding claim 5, Stankus et al. discloses all of the limitations of the above claim(s) except for the minimal clearance between an outermost surface of the rigid element and the broadest part of a cavity of the bulbous portion. The optimization of proportions in a prior art device is a design consideration within the skill of the art. In re Reese, 290 F.2d 839, 129 USPQ 402 (CCPA 1961).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stankus et al. in view of McLean (3,332,244). Stankus et al. discloses all of the limitations of the above claim(s) except for the rigid element is a solid sphere. McLean teaches a rigid ball (21) located within a bulbous section of a bolt (Fig. 3; column 6, lines 2 - 4) to improve the transfer of stress between the bolt and the surrounding rock. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the structure as disclosed by Stankus et al. with the solid sphere as taught by McLean to improve the transfer of stress between the bolt and the surrounding rock.

7. Claims 13 and 17 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stankus et al. in view of Seegmiller et al. (5,531,545).

Regarding claims 17 - 19, Stankus et al. discloses all of the limitations of the above claim(s). Seegmiller et al. teaches temporarily prising apart the outer strands of a cable bolt to expose the center strand, inserting a rigid element onto the center strand, and rewinding the outer strands to encase the rigid element (Figs. 3A - 3C; column 4, lines 14 - 27) to achieve the desired ground control by generating a heightened frictional resistance between the cable bolt and the

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surrounding strata. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method as disclosed by Stankus et al. with the prising apart of two strands of a cable bolt as taught by Seegmiller et al. to allow the insertion of a rigid element within the outer strands of the cable bolt to achieve the desired ground control by generating a heightened frictional resistance between the cable bolt and the surrounding strata.

Regarding claim 13, Stankus et al. in view of Seegmiller et al. discloses all of the limitations of the above claim(s) except for a pre-formed bulbous portion. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the method disclosed above to prise apart two strands of a cable bolt either before or after the formation of the bulbous portions as a matter of design choice.

### ***Response to Arguments***

8. Applicant's arguments filed 09 April 2009 have been fully considered but they are not persuasive.

Applicant argues that Stankus et al. does not disclose that all of the strands in each birdcage extend at least in part around the outermost surface of the nut or washer contained in the birdcage. Examiner replies that Stankus et al. teaches six outer strands forming the bulbous portion and one center strand and that the center strand is not part of the bulbous portion. All six of the strands forming the bulbous section extend at least in part around the outermost surface of the rigid element.

Applicant argues that Stankus et al. does not disclose spaced-apart birdcages. Examiner interprets the phrase "spaced apart" to mean that each bulbous portions occupies a different

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location on the tendon and is not overlapping the location along the tendon at which another bulbous portion is positioned. Examiner refers applicant to column 5, lines 11 – 12 of Stankus which clearly indicates that the birdcages are “positioned at spaced locations” along the cable bolt.

Applicant argues that Stankus et al. fails to disclose prising apart two strands of a bulbous portion and inserting a rigid element having an outermost surface into the bulbous portion.

Examiner reiterates the rejection of claim 13 as described above. In particular, column 5, lines 48 - 60 of Stankus et al. teaches using a spreading tool to unwind the outer strands of a cable bolt so that a nut can be placed on the center strand.

9. Applicant's arguments with respect to claims 13 and 17 - 19 have been considered but are moot in view of the new ground(s) of rejection.

10. Examiner suggests that applicant amend the claims to recite that all of the strands of the tendon extend at least in part around the outermost surface of a rigid element contained in the bulbous portion, or something similar. Such a limitation might overcome the art of record because adding that limitation would require both the center strand and the outer strands to extend at least in part around the outermost surface of the rigid element.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN D. ANDRISH whose telephone number is (571)270-3098. The examiner can normally be reached on Mon - Fri, 7:30am - 5:00pm, Alternate Fri off, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Kreck/  
Primary Examiner, Art Unit 3672

SDA  
5/12/2009